

CHAPTER NINE

ELECTRICAL SYSTEM

This chapter contains service and test procedures for all electrical and ignition components. Information regarding the battery and spark plug are covered in Chapter Three.

Models equipped with electronic shifting (FE and TE models) are also equipped with a digital combination meter that is mounted above the handlebar. Other models are equipped with standard lamp type indicator lights, but may be equipped with the digital combination meter as optional equipment.

The electrical system includes the following:

1. Charging system.
2. Ignition system.
3. Starting system
4. Lighting system.
5. Electrical components.

Tables 1-6 are located at the end of this chapter.

ELECTRICAL COMPONENT REPLACEMENT

Most ATV dealerships and parts suppliers will not accept the return of any electrical part. If you cannot determine the *exact* cause of any electrical system malfunction, have a Honda dealership retest that specific system to verify your test results. If you purchase a new electrical component(s), install it, and then find that the system still does not work

properly, you will probably be unable to return the unit for a refund.

Consider any test results carefully before replacing a component that tests only *slightly* out of specification, especially resistance. A number of variables can affect test results dramatically. These include: the testing meter's internal circuitry, ambient temperature and conditions under which the machine has been operated. All instructions and specifications have been checked for accuracy; however, successful test results depend to a great degree upon individual accuracy.

Resistance and Peak Voltage Testing

Resistance readings will vary with temperature. The resistance increases when the temperature increases and decreases when the temperature decreases.

Specifications for resistance are based on tests performed at a specific temperature (68° F [20° C]). If a component is warm or hot let it cool to room temperature. If a component is tested at a temperature that varies from the specification test temperature, a false reading may result.

To measure peak voltage, use a tester capable of measuring peak voltage or a voltmeter that has a minimum input impedance of 10M ohms/DCV and is coupled to a peak voltage adapter. An equivalent

tool is the Motion Pro IgnitionMate (part No. 08-0193).

Make sure the battery of any tester being used is in good condition. The battery of an ohmmeter is the source for the current that is applied to the circuit being tested; accurate results depend on the battery having sufficient voltage.

All peak voltage specifications are minimum values. If the measured voltage meets or exceeds the specifications, the test results are acceptable.

NOTE

When using an analog ohmmeter, always calibrate the meter between each resistance test by touching the test leads together and zeroing the meter.

CONNECTORS

Location

Most major inline connectors are mounted on two brackets, one at the front of the frame (**Figure 1**) and the other on the right side of the frame (**Figure 2**). Refer to the following for connector identification.

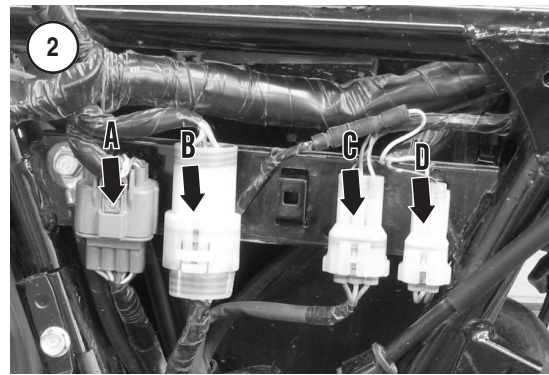
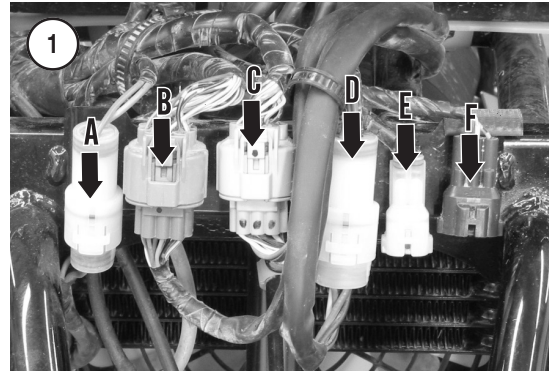
1. Shift control motor on FE/TE models (A, **Figure 1**).
2. Digital combination meter models (B, **Figure 1**).
3. Handlebar switch (C, **Figure 1**).
4. Ignition switch (D, **Figure 1**).
5. Accessory socket (E, **Figure 1**).
6. Headlights (F, **Figure 1**).
7. Gear position switch on FE/TE models (A, **Figure 2**).
8. Alternator (B, **Figure 2**).
9. Speed sensor (C, **Figure 2**).
10. Carburetor heater (D, **Figure 2**).

The position of the connectors may have been changed during previous repairs. Always confirm the wire colors to and from the connector and follow the wiring harness to the various components when performing tests.

Service

CAUTION

The internal pins are easily damaged and dislodged, which can cause a malfunction. Be careful when handling or testing the connectors.



Under normal operating conditions, the connectors are weather-tight. If continuous operation in adverse conditions is expected, pack the connectors with dielectric grease to prevent the intrusion of water or other contaminants. To prevent moisture from entering into the various connectors, disconnect them, and after making sure the terminals are clean, pack the connector with dielectric grease. Do not use a substitute that may interfere with current flow. Dielectric grease is specifically formulated to seal the connector and not increase current resistance. For the best results, the compound should fill the entire inner area of the connector. Each time a connector is unplugged, clean and seal it with dielectric grease.

An often overlooked area when troubleshooting are the ground connections. Make sure they are corrosion free and tight. Apply dielectric grease to the terminals before reconnecting them.

Removal/Disassembly

To remove a connector (**Figure 1** or **Figure 2**) from the mounting bracket, use a thin screwdriver

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